

634-015

Dart Aerospace Ltd.

Date: Thursday, 23/10/2008 1:23:59 PM  
 User: Julia Dawson

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	SKID TUBE ASSEMBLY
<b>Job Number</b> :	42896A		
<b>Estimate Number</b> :	12520		
<b>P.O. Number</b> :		<b>Part Number</b> :	D205634045
<b>This Issue</b> :	23/10/2008	<b>S.O. No.</b> :	
<b>Prsh't Rev.</b> :	NC	<b>Drawing Number</b> :	D2580 REV D
<b>First Issue</b> :	1/1	<b>Project Number</b> :	N/A
<b>Previous Run</b> :	42895A	<b>Drawing Revision</b> :	D
	<b>Type</b> :	<b>Material</b> :	
	SKIDTUBES	<b>Due Date</b> :	01/02/2009
<b>Written By</b> :		<b>Qty:</b>	1
<b>Checked &amp; Approved By</b> :	JLD 28.10.23	<b>Um:</b>	Each
<b>Comment</b> :	Est Rev:C Revised Steps 06-09-06 JLM Est Rev:D Added SS Wearplates & Gaskets 07-07-09 JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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## Comment: DOCUMENT CONTROL

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-045 CHG002

N/A

2.0	D25001190	Ext'n -1' Beam Tube 4"
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-190	Skid Tube Extrusion	B37544

Jb 8-11-12

3.0	D2596	Web, 205 Skidtube
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2596	205 Web	B-43374

A2M 8-11-13

4.0	SKIDTUBES 1	SKIDTUBESS RESOURCE 1
-----	-------------	-----------------------



## Comment: LANDING GEAR RESOURCE 1

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2580 if necessary Deburr ends

3-Drill pilot holes using drill jig DT 8149

4-Acid etch and Alodine tube per QSI 005 4.1

7 50 8-11-13

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 23/10/2008 1:23:59 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Open holes to 0.500" as per Dwg D2580 without cutting fluid

6-Countersink holes as per Dwg D2580 without cutting fluid

7-Deburr and blow out all chips from inside of tube

8-Add extra holes to web prior to bonding, per DEO 9183

9-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting  
Pick:

Qty	Part Number	Description	Batch
A/R	Sikaflex-291	17109	449
Sikaflex expire date: 8-11-30			
Start Time: 4:00		Date: 8-11-13	
Fin Time: 7:00		Date: 8-11-14	

JB 8-11-13

AWM  
8-11-13

5.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: BENDING MACHINE

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

JB 8-11-14

6.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr ends after cutting. Remove alodine from around holes

2-Drill extra fwd hole as per DEO 9183 using  
drill jig DT8461

3-Drill extra middle hole as per DEO 9183 using  
drill jig DT8462

4-Drill pilot holes for aft cap using DT8215, \*\*\*DO NOT OPEN TO FINISH SIZE\*\*\*

5-Drill extra aft holes as per DEO 9183 using  
drill jig DT8463 locating from aft cap hole and aft saddle hole.

JB 8-11-13

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC; Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #: Machine Or Operation: Description :

7.0

QC5

INSPECT WORK TO CURRENT STEP



P10

Comment: INSPECT WORK TO CURRENT STEP

BE 08/11/17

8.0

D25763

Step (maching detail)



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2576-3	Step	B38392

BE 08/11/17

9.0

D2579

Crossbolt Spacer



Comment: Qty.: 24.0000 Each(s)/Unit Total : 24.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
24	D2579	Spacers	B 41666

BE 08/11/17

24

10.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Prepare tube for welding D2576-3 StepRemove alodine as required.

JD 8-11-14

2-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R

Aluminum Rod

m/09813

BE 08/11/17

3-Weld crossbolt spacers D2579 as per Dwg. D2580 and QSI 004. For D2579

spacers, weld one

side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R

Aluminum Rod

m/09813

BE 08/11/17

4-Grind welds as per Dwg D2580 Grind flush ridge made from bending

5-Drill holes for wearplates using DT 8217Open holes to 19/64", adjust stopper not to hit web. Deburr

6-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

\*\*\*\*\*DO NOT COUNTERBORE EXTRA HOLES PUT IN AT STEP 13,14 AND 15 (LEAVE AT 0.384" AS PER DEO 9183)\*\*\*\*

7-Open aft cap holes to #6 Drill bit. Deburr

8-Drill pilot holes for Tow ring using DT8091, open to .640"and Deburr

ANM  
8-11-14

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-045 PAR #: \_\_\_\_\_ Fault Category: Prod/Skid tube NCR: (Yes) No DQA: D Date: 08/12/19  
 Resolution: \_\_\_\_\_ Disposition: Re-work QA: N/C Closed: D Date: 08/12/19

NCR: <u>42896A</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06-12-09	6.0	<del>All</del> The aft holes per DE09183 are not as per dwg. Hole spacings are too close together by 0.080". N.C. noticed at 31.0 R.C. Jig DT8463 is incorrect & inspected incorrectly & lack of attention.	<i>[Signature]</i>	See NCR08-116 Fabricate qty 4x0.005 x 0.155" with a 0.080" 45° chamfer out of 6061-T6 bar M <u>105671</u>	<i>[Signature]</i> 08/12/11	C	<i>[Signature]</i>	08-12-09
			WES/1412	Remove the 2 aft x-bolt spacers.	BE 08/12/10			
			<i>[Signature]</i>	weld the 6061 plugs in to place. GRIND flush inside & out. Mark out new hole locations as <u>per dwg</u>	BE 08/12/10 IT 08-12-09			
			WES/1412	Drill & install new x-bolt spacers per WES1004		S 08/12/11	<i>[Signature]</i>	08-12-09
			<i>[Signature]</i>	B <u>41666</u> x2	BE 08/12/10	S 08/12/11	<i>[Signature]</i>	08-12-09

NOTE: Date &amp; initial all entries

see comment on last page

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

S 08/11/26 (X)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/11/26 (X)

13.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

M-L 08/11/26 (X)

14.0

POWDER COATING

POWDER COATING



M 102316



Comment: POWDER COATING

Powder Coat \*\*\*\*GREEN\*\*\*\*Sandtex (Ref: 4.3.5.8) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

1:15  
320 OF  
1:45

M-L 08/12/15  
M-L 08/11/26

15.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-12-26 (X)

16.0

D2855

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Cap

Batch: 1335920

MS

17.0

AN35A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Bolt

Batch: 14100188

MS

08-12-26 (X)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #:	Machine Or Operation:	Description :
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18.0	AN960JD10L	Washer
------	------------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Washer

Batch: M1105793

HL

19.0	AN960C10L	washer
------	-----------	--------



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

washer

batch M109798

HL

20.0	ALS71032130	Insert
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Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Insert

Batch: M105814

HL

A

21.0	AN3C4A	BOLT
------	--------	------



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

BOLT

Batch: M109798

HL

22.0	D356613	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch: B42147

HL

23.0	D35665	Gasket
------	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch: B411467

HL

24.0	D35661	Gasket
------	--------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

GASKET

Batch: B43264

HL

08-12-06

(21)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #:	Machine Or Operation:	Description :
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25.0	D356413	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B42257 *JS*

26.0	D356411	Wearshoe
------	---------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B43707 *JS*

27.0	D35649	Wearshoe
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B42258 *JS*

28.0	D35645	Wearshoe
------	--------	----------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

WEARSHOE

Batch: B34408 *JS*

29.0	D25943	O-Ring, 205 Skidtube
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Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

O-Ring

Batch: B29908 *JS*

30.0	D25941	Plug, 205 Skidtube
------	--------	--------------------



Comment: Qty.: 16.0000 Each(s)/Unit Total: 16.0000 Each(s)

Plug

Batch: B42807 *JS*

31.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearplates as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R

Sikaflex-291

M110110  
M109942 *JS*

08-12-06 *JS*

(X)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Thursday, 23/10/2008 1:24:00 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 42896A

Part Number: D205634045

Job Number:



Seq. #:

Machine Or Operation:

Description :

1 Sikaflex expire date: 09/07

2 Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3 Inspect for foreign object per QSI 024

4 Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 M109942 M110110  
Sikaflex expire date: 08/11 09/07

08-12-10 (XV)

5 Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: M109913  
08-12-17

32.0

QC5

INSPECT WORK TO CURRENT STEP



509/12/17



Comment: Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

33.0

PACKAGING 1

PACKAGING RESOURCE #1



(K)

Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-634-045

Location:

PPP Rev:

DDP 42896

5/12/18

50

34.0

QC21

FINAL INSPECTION/W/O RELEASE



08/12/19

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



12 08-12-18

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

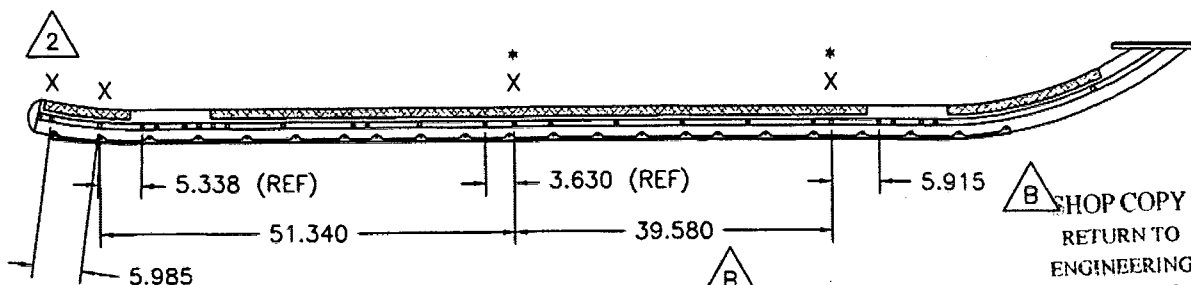
DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. DEO 9183	REV. B SHEET 1 OF 1
DATE 00.05.15		TITLE ADD SKIDTUBE P/N D2580-045	SCALE NTS
A	00.03.29	NEW ISSUE	
B	00.05.15	39.580 WAS 39.620	

## DART ENGINEERING ORDER

AMEND DRAWING D2580 REV. C TO ADD D2580-045 ASSEMBLY

D2580-045 IS IDENTICAL TO D2580-041, EXCEPT FOR THE FOLLOWING CHANGES:

- 1) INSTALL CROSS BOLT SPACERS AT LOCATIONS MARKED 'X' ACCORDING TO THE FOLLOWING PROCEDURE.
  - a) DRILL  $\varnothing 0.508$  HOLES AT LOCATIONS SHOWN BELOW MARKED 'X'. CHAMFER HOLES  $0.030 \times 45^\circ$ . NOTE THAT HOLES WILL ALSO HAVE TO BE TRANSFERRED TO THE D2596 WEB AT THE \* LOCATIONS. IT IS ACCEPTABLE TO PRE-DRILL THE D2596 WEB IN THESE LOCATIONS BEFORE INSTALLING THE WEB IN THE SKIDTUBE. OPEN HOLES TO  $\varnothing 0.63$  AND TOUCH UP WITH ALODINE PER QSI 005 4.1.
  - b) INSERT D2579 CROSS BOLT SPACERS INTO THE HOLES.
  - c) WELD INTO PLACE PER DART QSI 004 AND GRIND FLUSH.
  - d) REMOVE SPILL OVER LEAVING HOLE DIMENSION  $\varnothing 0.380$ - $\varnothing 0.390$ .
- 2) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION.
- 3) POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 INSTEAD OF WHITE (REF. 4.3.5.1).



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**DART**

DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. DSI 9184	REV. A SHEET 1 OF 1
DATE 00.03.29		TITLE ADD SKIDTUBE P/N D205-634-015	SCALE NTS
A	00.03.29	NEW ISSUE	

## DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D205-634 REV. B.

REF. CANADIAN STA: SH96-88  
US FAA STC: SR00563NY

ADD D205-634-015 INSTALLATION. PARTS LIST IS IDENTICAL  
TO PARTS LIST FOR D205-634-011 EXCEPT THAT:  
D205-634-045 REPLACES D205-634-041  
D2580-045 REPLACES D2580-041

THE DIFFERENCE BETWEEN D205-634-011 (D205-634-041)  
AND D205-634-015 (D205-634-045) IS THAT EXTRA  
SPACERS HAVE BEEN ADDED AT LOCATIONS MARKED 'X' AND  
ASSEMBLY IS PAINTED GREEN.



D205-634-015 (D205-634-045)

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART****RELEASED**  
07.02.28 #

DESIGN #	DRAWN BY RH	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL  $\varnothing 0.297$  HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED  
07-06-28-11

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\sqrt{\frac{1}{4}}$

Diagram illustrating the installation of the D2855 cap on the rear of the engine. The cap is secured with an AN3-5A bolt (1) and an AN960JD10L washer (1) at two locations. The cap is sealed with SIKAFLEX-241/-291. The cap is labeled D2855 CAP. The bolt is labeled AN3-5A BOLT (1). The washer is labeled AN960JD10L WASHER (1) (2 PLACES). The seal is labeled SEAL WITH SIKAFLEX-241/-291. The cap is shown with a diameter of  $\varnothing 0.208$ . The cap is shown with a thickness of 0.40.

5

D2579 SPACER

D2596 WEB (REF)

AL57-1032-130 (REF)  
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

[illegible]

**AFT ASSEMBLY DETAIL**

WELD AS PER DETAIL B  
BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

0.5 1.5 1.5 D P P P P P P P

8

1.5 1.5 1.5

REFER TO DETAIL C



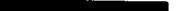


D3566-1 D3566-5 D3566-1 D3566-13

D3564-11 D3564-5 D3564-9 D3564-13

AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(50 PLACES)

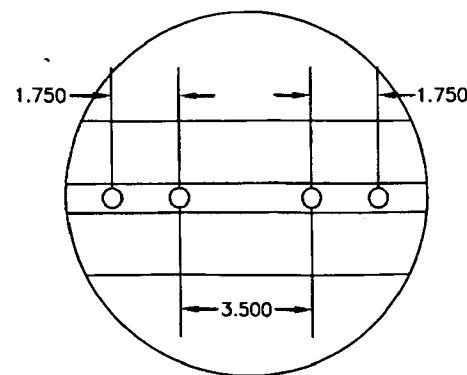
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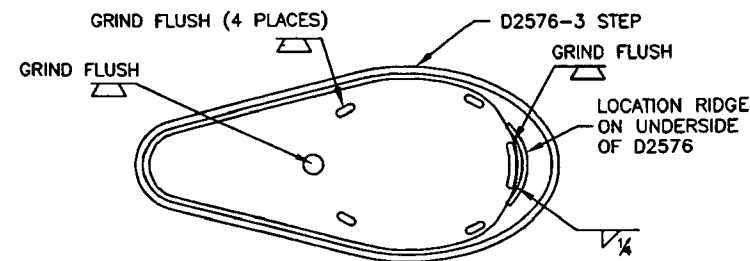


**DETAIL E**  
SCALE 5:24

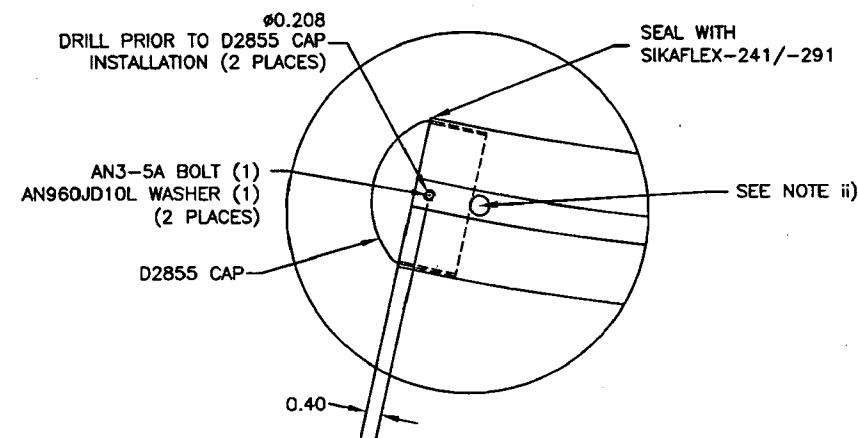


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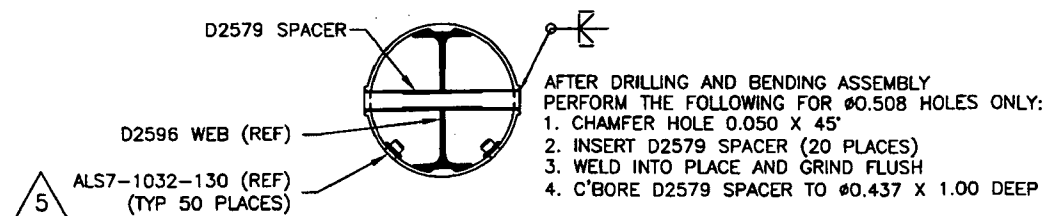
**DETAIL F**  
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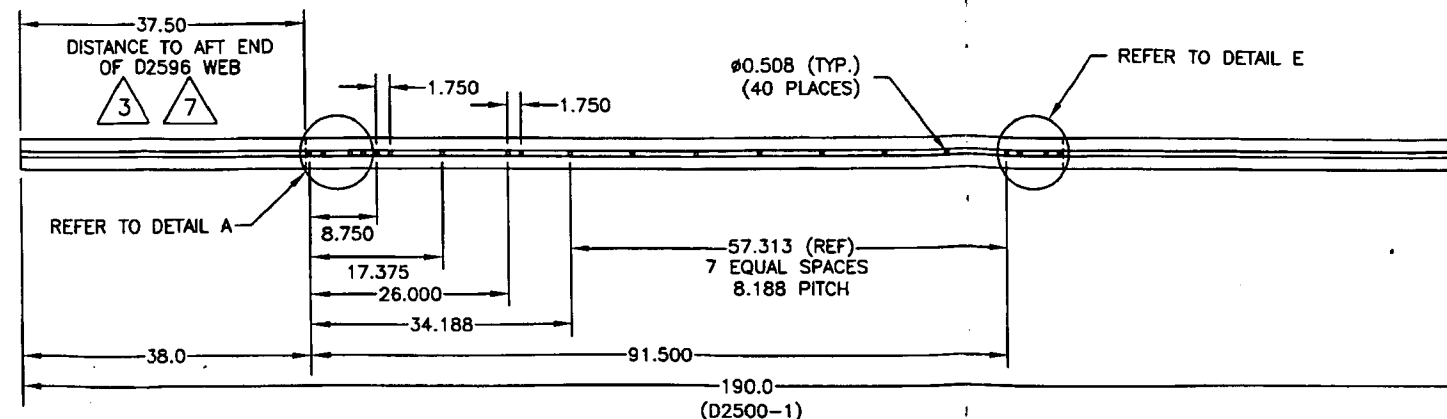
**DETAIL G**  
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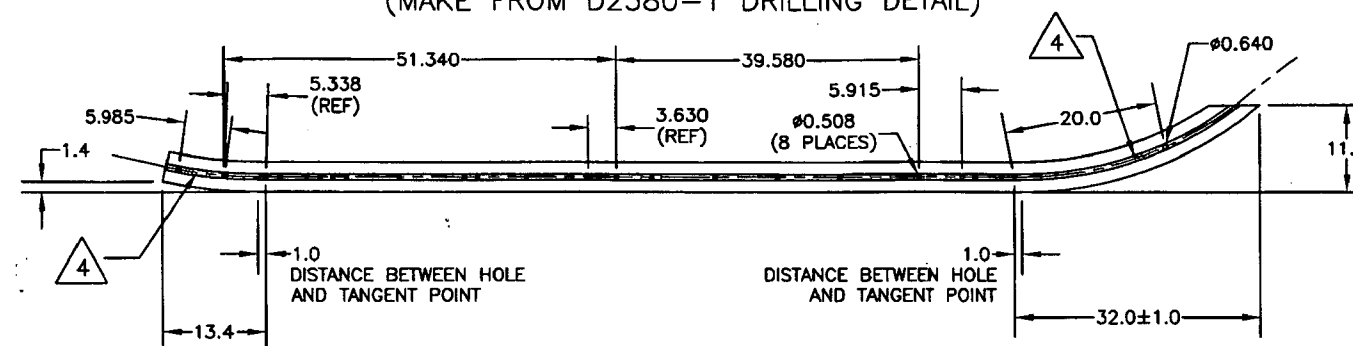
**SECTION H-H**  
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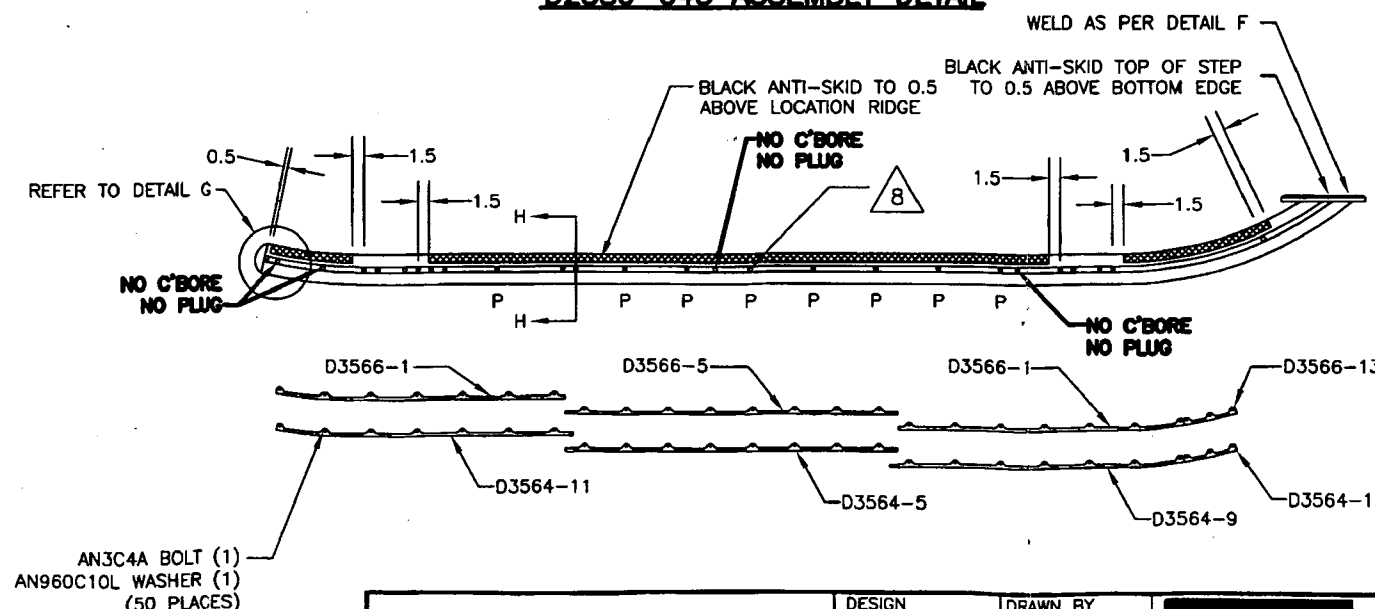
**D2580-1 DRILLING DETAIL**



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



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**D2580-045 NOTES**

- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION

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DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24	



NO. 173

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 41315A0  
Part number: D204 635041  
Description: 204/205 shield tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

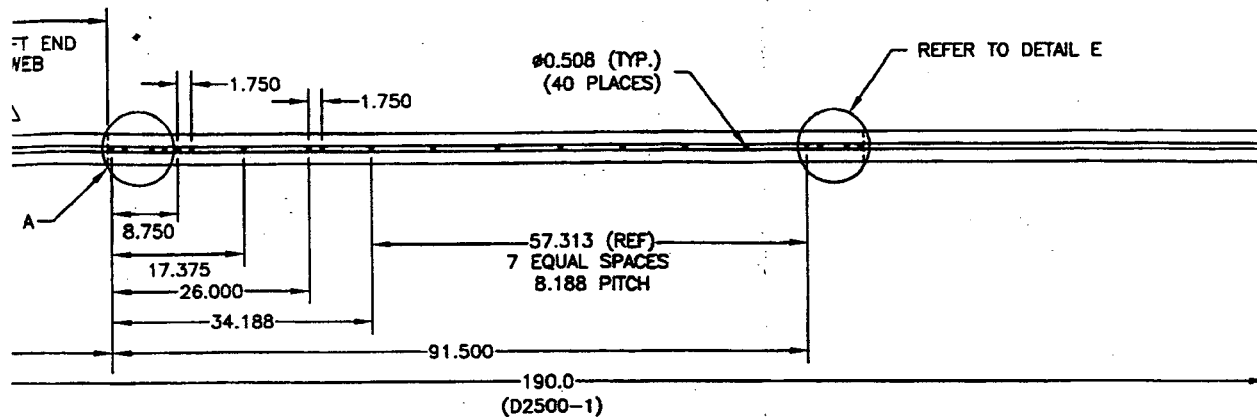
Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Pat Duval Date of Test Coupon 080924  
Welder Barclay Elliott Date of Test Coupon 080924

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

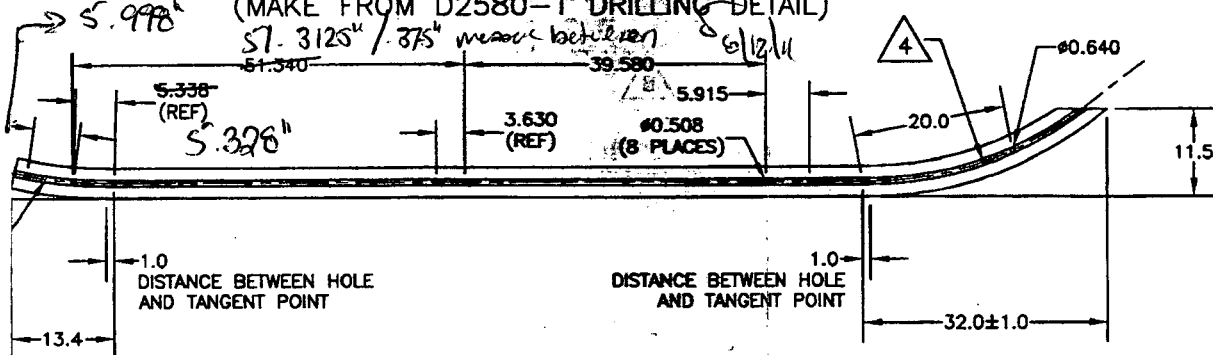


## D2580-1 DRILLING DETAIL

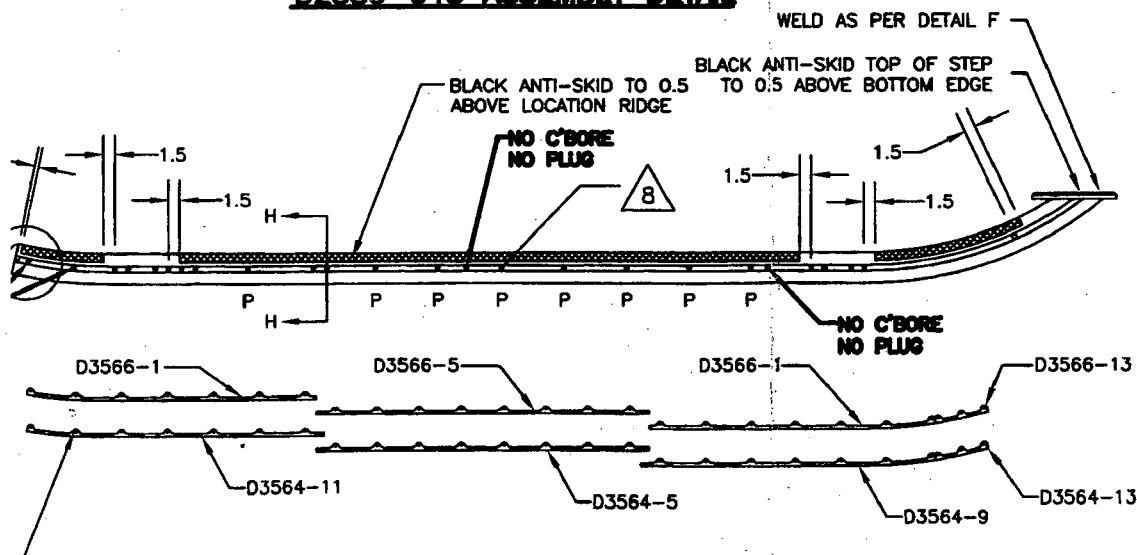


**D2580-5 BENDING AND CUTTING DETAIL**

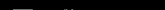


(MAKE FROM D2580-1 DRILLING DETAIL)



**D2580-045 ASSEMBLY DETAIL**



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